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Some American Plum-trees. North America is the real home of Plum-trees as it is of Hawthorns. They range across the continent and from the valley of the St. Lawrence nearly to the Rio Grande. Plum-trees are most abundant in eastern and southern Kansas, eastern Oklahoma, southern Arkansas, and Texas from the valley of the Red River to the Edwards Plateau. In this region Plums are represented by more species than are found in all the world outside of North America. Some are trees of considerable size and others are large or small shrubs which frequently spread in sandy soil by means of shoots from the roots into often impenetrable thickets covering many acres. It has proved difficult to obtain the material needed for a proper study of these plants. They flower early when there is little else in bloom to occupy the collector, who is obliged to make long and expensive journeys to collect the flowers of one genus. In four years out of five the young fruit is destroyed by frost which in that region usually comes after the flowering of Plum-trees; and when the fruit is not destroyed it is often difficult to obtain, for it usually ripens at the season when heat and insects make plant collecting difficult and disagreeable. The different species are often widely separated and this makes impossible the careful comparative study of the living plants needed to understand properly their similarities and differences. There is little hope, therefore, that American Plums can be thoroughly understood before all or most of the species can be grown together in one garden until they flower and ripen their fruit. Such a collection will be difficult to establish and maintain, for some of the interesting species are not hardy in the north, and it is not probable that such a collection will be undertaken except in some

of the northern states. Fortunately several years ago the Park Department of Rochester, New York, with an intelligence and foresight not always shown by municipal officials, sent one of its assistant superintendents to Oklahoma and Texas to study the wild Plums and to collect living plants and other material needed for their better understanding. The result of several expeditions is a remarkable collection of hundreds of living plants which makes Rochester the best place to see and study the Plum-trees of the Arkansas-Oklahoma-Texas region, that is the region where there are more of these plants than anywhere else in the world. A preliminary study of the collection reveals numerous interesting new forms, some of them hybrids and others possibly new species. It shows, too, that among these Plums are plants of exceptional beauty when their fruit ripens. All Plums are handsome when in early spring their white flowers cover the leafless branches; on some species the flowers are rather larger than on others, but as flowering plants there is no great choice between them. They greatly vary, however, in their leaves and in the size and shape of their fruit. From the fruit of nearly all American Plums good jellies and preserves can be made, and selected seedling forms of several of the species have received the attention of pomologists and are now cultivated as fruit trees in parts of this country where the varieties of the European *Prunus domestica* cannot be successfully grown. As ornamental plants merely the value of some of the American Plums is not yet understood. The handsomest of them, *Prunus hortulana*, the most beautiful of all Plum-trees, is common from southeastern Illinois to eastern Kansas and Oklahoma. It is a tree from twenty to thirty feet high with a clean trunk and wide-spreading branches which form a round-topped shapely head. The leaves are unusually large for a Plum-tree, and smooth and very lustrous on the upper surface. The fruit ripens late in September and in October, and is globose or slightly longer than broad, scarlet, lustrous, and from three-quarters of an inch to an inch in diameter. It is produced in great quantities and ripens before the leaves change color or fall; and a well-fruited tree of *Prunus hortulana* is more beautiful in early October than any Crabapple or Hawthorn, or indeed than any other small tree which can be grown in the northern states. In the Rochester collection are plants of *Prunus hortulana* which are not trees but wide-spreading shrubs which should prove useful in gardens too small for the proper display of the tree form. *Prunus Reverchonii* has also proved a success at Rochester. On the prairies of eastern Texas it is a low shrub often spreading into great thickets, but in cultivation at the north it is inclined to become a small tree. The leaves are smaller and less lustrous than those of *P. hortulana*, and the fruit is smaller but equally brilliant and abundant. *Prunus venulosa*, another of the prairie species of eastern Texas, and the different forms of the Chickasaw Plum (*P. angustifolia*), especially the broad-leaved, large-fruited var. *varians*, and the different forms of *Prunus Munsoniana* of which the Wild Goose Plum is the best known, can now all be seen to advantage in Rochester. The "Big-tree Plum" so-called of Texas (*Prunus mexicana*), the largest, most abundant and most conspicuous Plum-tree of Texas, has also proved hardy in Rochester.

This tree is interesting as a conspicuous feature of the Texas flora, but less ornamental and less valuable as a fruit tree than most of the tree plums of the United States. Among the hybrids which have appeared from time to time in the Rochester parks is one between the Beach Plum (*P. maritima*) common on the northeast coast and the Wild Plum of the eastern states (*P. americana*). This hybrid is a bush five or six feet tall and eight or ten feet through the branches; it bears large crops of purplish fruit intermediate in size between that of its parents, and of better quality than that of either of them. Judging by the fruitfulness of this hybrid at Rochester it should prove a valuable plant for small gardens.

All the Plums which have been brought to Rochester from the southwest are growing in the Arboretum, but Boston is not sufficiently civilized to see and enjoy these plants at the season when they are most interesting, and in the case of several species most beautiful. In Rochester Plum-trees loaded with ripe and tempting fruit standing close to the sidewalks of streets near the parks and without the protection of a fence are not interfered with or injured. The fruit is there for the public to look at and enjoy, and spring and autumn throngs of visitors enjoy these wonderful plants. In the Arboretum it has been found necessary, in order to save the trees from injury, to pick every plum and cherry as they begin to color. Boys, and they are not always boys, break down the branches in their efforts to secure the half ripe fruit. Two years ago the best plant of *Prunus hortulana* in cultivation which had been growing in the Arboretum for twenty-eight years was so broken down that it was necessary to destroy it. It is the business of the Arboretum to furnish information about trees, and it is the public which suffers when the Arboretum is not protected from the public by the police and the courts.

Street Trees. There is at present a widespread interest in the United States in Nut-trees and their cultivation, and the general planting of Walnut and Hickory-trees on country roadsides in some of the northern states has been advocated. There are objections, however, to the use of these trees for such a purpose. Walnut and Hickory-trees are difficult to transplant, and the best success is obtained by planting one or two-year-old seedlings, that is plants only a few inches high. Such small plants must be kept clear of weeds and encroaching shrubs by which they might be easily destroyed, and with the best of care they would not be large enough to give much shade or produce many nuts in less than twenty-five or thirty years. The difficulty of growing the young trees can of course be overcome if cost is not considered; more difficult will be the protection of the trees when they bear nuts. Nuts are assiduously sought by men and boys who do not hesitate to break down nut-trees wherever they are left unprotected, and as the number of motor cars increase on country roads the facilities for robbing the trees will also increase.

The selection of trees for street and roadside planting presents many difficulties. In the interior of large cities, especially in those where bituminous coal is principally used, the *Ailanthus* is best able of all

trees to support the drought and dirt to which trees in cities are subjected. The *Ailanthus*, however, cannot be successfully used in narrow streets. The streets which are usually planted in this country are not in the business and most densely populated sections of cities but in their residential quarters and in their suburbs; and it is difficult to find the proper trees to plant along the usually narrow streets of their outlying districts. There are objections to most of the trees which generally have been used for this purpose. At the north the tree which has been most generally planted along streets is the American Elm-tree. It is one of the finest trees in the world, and as it may sometimes be seen shading the broad central street of an old New England village no street tree can equal it. The American Elm, however, will not flourish in sterile soil, and it cannot bear drought or atmosphere continually filled with dust and smoke. It needs room in which to grow, and its wide-spreading branches unfit it for the narrow streets usually found in the suburbs of large cities. Some of the Old World Elms are narrower trees, and the Hedge-row Elm of southern England, usually known in this country as *Ulmus campestris*, has grown well in Boston and its neighborhood for more than a hundred years and proved a better city tree than the American Elm. It is, however, too large a tree for the ordinary suburban street. The Sugar Maple is one of the best trees to plant by country roadsides, but the Sugar Maple cannot bear the hardships of city life, and even in suburbs usually languishes. The so-called Norway Maple (*Acer platanoides*) is much better able to adapt itself to the conditions trees have to put up with in cities and in their neighborhood. It has been largely used as a street tree, but the trunk is too short and the branches are too low and form too broad a head for a good street tree. What is needed for street planting are tall, fast-growing trees with erect or semi-erect branches forming a head narrow enough to find room between the curb and the property line but wide enough to shade the street. An American Elm which may be expected to be a valuable tree for street-planting has recently been discovered in the neighborhood of Rochester, New York. This tree is now from seventy to eighty feet high, with a short trunk from which spring several long erect main branches which form a head not more than eighteen feet in diameter. It will be largely propagated for street-planting in Rochester. In Rochester, too, have recently been found two Norway Maples with erect growing branches. The head of one of these trees is too narrow for street-planting, but the other with an oval head equal in width to a quarter the height of the tree promises to be useful for this purpose. In the cities of the Southern States the streets are usually wider than in the north and the Water Oak (*Quercus nigra*) finds room in which to develop; and there is not in any country a handsomer, and more easily managed street tree than the Water Oak, which unfortunately is not hardy anywhere in the north.